

AMENDMENT TO THE CLAIMS

Please **AMEND** claims 1 and 3-10.

No new matter has been added. This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (Currently amended) An electro-chemical sensor comprising:
at least two a first and a second redox systems system, wherein the first and the second redox systems comprise different redox systems that are sensitive to the same species, and wherein the first and the second redox systems are coupled with a conductive substrate and configured to function in use as a working electrode.
2. (Original) The sensor of claim 1 wherein the species are protons.
3. (Currently amended) The sensor of claim 1 wherein the ~~at least~~ first and the second ~~two~~ redox systems have a maximum or peak redox reaction at different voltages.
4. (Currently amended) The sensor of claim 1 wherein the ~~at least two~~ first and the second redox systems are ~~mounted onto~~ bonded with or immobilized on the ~~same~~ conductive substrate.
5. (Currently amended) The sensor of ~~claim 4~~ claim 1 wherein the ~~at least two redox systems are mounted onto~~ conductive substrate comprises a carbon-based substrate.
6. (Currently amended) The sensor of ~~claim 5~~ claim 1 wherein the ~~at least two redox systems are mounted onto~~ conductive substrate comprises a carbon powder substrate.

7. (Currently amended) The sensor of ~~claim 5~~ claim 1 wherein the ~~at least two redox systems are mounted onto~~ conductive substrate comprises a diamond-based substrate.

8. (Currently amended) The sensor of ~~claim 7~~ claim 1 wherein the ~~redox systems are mounted onto~~ conductive substrate comprises a multi-walled nanotube-based substrate.

9. (Currently amended) The sensor of claim 1 further comprising:

a detector adapted to measure ~~the~~ a redox potential of said ~~at least two~~ first and said second redox system in the presence of the species and to convert measurements into an signal indicative of the concentration of said species.

10. (Currently amended) An electro-chemical sensor for determining ~~the~~ a concentration of a molecular species in a fluid comprising:

a first redox system sensitive to said molecular species; ~~and~~

a second redox system sensitive to said molecular species, wherein the first and the second redox system are mounted onto a conductive substrate and wherein the first and the second redox systems are configured to function in use as a working electrode;

a voltage supply and an electric current detector configured to perform voltammogramic measurements; and

an analyser configured to detect relative shifts in said voltammogramic measurements.

11. (Original) A downhole tool for measuring characteristic parameters of wellbore effluents comprising an electro-chemical sensor in accordance with claim 1.

12. (Original) A downhole formation sampling tool for measuring characteristic parameters of wellbore effluents comprising an electro-chemical sensor in accordance with claim 1.

13. (Original) A downhole tool for measuring characteristic parameters of wellbore effluents comprising an electro-chemical sensor in accordance with claim 1 mounted onto a permanently installed part of the wellbore.

14. (New) The sensor of claim 1 wherein one of the first and second redox systems comprises one of an anthraquinone, a phenanthrenequinone and N,N'-diphenyl-p-phenylenediamine.

14. (New) The sensor of claim 1 wherein one of the first and second redox systems are sensitive to H⁺.